Journal of Physics: Conference Series 2015 vol.661 N1

Synchronization of EEG activity in patients with bipolar disorder

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Abstract

© Published under licence by IOP Publishing Ltd. In paper we apply the method based on the Flicker-Noise Spectroscopy (FNS) to determine the differences in frequency-phase synchronization of the cortical electroencephalographic (EEG) activities in patients with bipolar disorder (BD). We found that for healthy subjects the frequency-phase synchronization of EEGs from long-range electrodes was significantly better for BD patients. In BD patients a high synchronization of EEGs was observed only for short-range electrodes. Thus, the FNS is a simple graphical method for qualitative analysis can be applied to identify the synchronization effects in EEG activity and, probably, may be used for the diagnosis of this syndrome.

http://dx.doi.org/10.1088/1742-6596/661/1/012022